

Serial No.: 10/721,916
Group Art Unit: 2813

REMARKS

Election/Restrictions

The Examiner acknowledged the Applicants' election of group I, claims 1-10 in the reply filed on 6/21/05. However, although the Applicants have elected claims 1-10, it is respectfully submitted for the record that the Applicants' election in response to the Restriction Requirement was with traverse and without waiving any rights for reconsideration of claims 11-20 or of filing a continuation or divisional application.

Further, it is respectfully pointed out that the process of making and the product are not believed to be patentably distinct, and that the search and examination of the invention can be performed without "serious burden". Notwithstanding the Examiner's explanation, it is pointed out that it is now established and common practice for Examiners in the United States Patent and Trademark Office ("USPTO") regularly and without objection to perform searches - in a single application - on related method and device claims in applications filed in the USPTO under the Patent Cooperation Treaty ("PCT"). This practice is in conformance with the requirements of PCT Rule 13, and because the USPTO is a PCT receiving office, the USPTO is bound by the PCT Rules. The Restriction Requirement in the present application is not in conformity therewith and therefore should not have been maintained following the Applicants' traversal thereof.

For these reasons, it is believed that maintenance of the traversed Restriction Requirement was improper, that the Applicants' traversal is controlling, and that the traversal must therefore be respected. Withdrawal of the Restriction Requirement is therefore respectfully requested so that canceled claims 11-20 can be re-introduced into the present application and properly examined herewithin.

Specification

The Examiner stated that the title of the invention is not descriptive and that a new title is required that is clearly indicative of the invention to which the claims are directed. While it is believed that the original title was clearly indicative of the invention, the title has accordingly been amended to indicate the invention even more clearly.

Serial No.: 10/721,916
Group Art Unit: 2813

Claim Rejections - 35 USC §102

Claims 1-10 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hawthorne et al. (U.S. Patent No. 6,008,991, hereinafter "Hawthorne").

Hawthorne provides packaged integrated circuits ("ICs") with heat spreading standoff support members. An IC device is mounted on a circuit board. Each IC device includes a thin dielectric substrate bearing a plurality of conductive leads. A die is positioned in a hole in the substrate. The die has pads that are bonded to leads carried by the substrate. The leads include free outer ends for connection to contact pads on the circuit board. The free leads are isolated from pressure applied to the chip-on-tape assembly after it has been connected to a circuit board by means of a thin self-supporting thermally conductive heat spreader. The heat spreader contacts the side of the die opposite its pads and includes fixed standoff and/or alignment pins. The pins extend through alignment holes in the thin substrate and are in physical contact with the printed circuit board.

Regarding claim 1, this claim has been amended to incorporate therein a portion of the subject matter of claim 8. The Applicants respectfully traverse the rejection of claim 1 since the Applicants' claimed combination now includes the limitation not disclosed in Hawthorne of:

"forming...a cross-sectional profile that is substantially constant in at least one horizontal direction." [deletions for clarity]

The Examiner states in the Office Action dated September 13, 2005 (regarding claim 8):

"...forming the unitary metallic plate...into a cross-sectional profile that is substantially constant in at least one horizontal direction (see figures 4, 9-10)." [deletions for clarity]

However, Hawthorne does not disclose forming a cross-sectional profile that is substantially constant in at least one horizontal direction. FIGs. 4, 9-10, cited by the Examiner, do not teach the claimed limitation. FIGs. 4, 9-10 of Hawthorne are cross-sectional views taken on a single plane and disclose nothing concerning forming a constant cross-sectional profile in a horizontal direction. Instead, FIGs. 4, 9-10 need to be compared

Serial No.: 10/721,916
Group Art Unit: 2813

with Hawthorne's pictorial view FIG. 3 that clearly shows that the heat spreader profile is not constant but instead changes in every horizontal direction. Likewise, Hawthorne's written description of the heat spreader 66 fails to teach or disclose forming a cross-sectional profile that is substantially constant in at least one horizontal direction, as explained in Hawthorne column 5, lines 19-31, which states:

“...a heat spreader, generally indicated at 66. The heat spreader is formed of a rigid, strong, self-supporting, thermally conductive material...
The heat spreader is either molded or stamped in the configuration shown, having a somewhat raised central die receiving section 68 surrounded by lateral sections 70...” [deletions and underlining for clarity]

Thus Hawthorne does not disclose forming a cross-sectional profile that is substantially constant in at least one horizontal direction as claimed in claim 1. Rather, in moving horizontally from any edge to an opposite edge, the cross-sectional profile goes from flat to centrally-raised and then back to flat. That is not a constant cross-sectional profile.

It is therefore respectfully submitted that independent claim 1 as now amended, and the respective claims 2-8 depending therefrom, are not anticipated by Hawthorne under 35 USC §102(b) because:

“Anticipation requires the disclosure in a single prior art reference disclosure of each and every element of the claim under consideration.” *W.L. Gore & Assocs. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983) (citing *Soundsciber Corp. v. United States*, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), *adopted*, 149 USPQ 640 (Ct. Cl. 1966)), *cert. denied*, 469 U.S. 851 (1984). *Carella v. Starlight Archery*, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir.), *modified on reh'g*, 1 USPQ 2d 1209 (Fed. Cir. 1986); *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

Withdrawal of the rejection is therefore respectfully requested.

Regarding claims 2-8, these dependent claims each depend from independent claim 1 and are believed to be allowable since they contain all the limitations set forth in the independent claim 1 from which they depend and additionally claim non-obvious combinations thereof. Withdrawal of the rejections of claims 2-8 is therefore respectfully requested because of *W.L. Gore & Assocs. v. Garlock, Inc.* and the other cases cited therewith, *supra*.

Serial No.: 10/721,916
Group Art Unit: 2813

Regarding claim 4, the Applicants also respectfully traverse the rejection since the Applicants' claimed combination includes the limitation not disclosed in Hawthorne of:

"forming an electromagnetic interference shield for the channel"

The Examiner states in the Office Action:

"forming an electromagnetic interference shield for the channel (114, so that the magnetic field won't be able to go through the metal shield)"

However, Hawthorne makes no reference to forming an electromagnetic interference shield, nor anywhere uses the terms "electromagnetic", "interference", or "shield". Since there is no disclosure, teaching, or suggestion in Hawthorne of the claimed limitation, the Applicants respectfully request an Examiner Affidavit disclosing the Examiner's personal knowledge regarding this limitation pursuant to 37 CFR §1.104(d)(2) (2002):

"When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons."

Regarding claim 5, the Applicants also respectfully traverse the rejection since the Applicants' claimed combination includes the limitation not disclosed in figures 9-10 of Hawthorne of:

"forming...auxiliary heat spreader" [deletions for clarity]

The Examiner states in the Office Action:

"forming...auxiliary heat spreader configured for attachment on top of the semiconductor heat spreader (see figures 9-10)." [deletions for clarity]

However, the structures in figures 9-10 of Hawthorne are shipping trays, not auxiliary heat spreaders. Withdrawal of the rejection is therefore respectfully requested on this ground as well because of *W.L. Gore & Assocs. v. Garlock, Inc.* and the other cases cited therewith, *supra*.

Serial No.: 10/721,916
Group Art Unit: 2813

Regarding claim 6, the Applicants also respectfully traverse the rejection since the Applicants' claimed combination includes the limitation not disclosed in Hawthorne of:

"forming attachment means...selected from tabs, locking tabs, deformable sides, side ledges, side clips, clip bosses, center clips, side arms, and a combination thereof." [deletions for clarity]

The Examiner states in the Office Action:

"forming attachment means...selected from tabs, locking tabs, deformable sides, side ledges, side clips, clip bosses, center clips, side arms, and a combination thereof (legs, 124/126/158/160)" [deletions for clarity]

However, Hawthorne makes no reference to forming attachment means selected from tabs, locking tabs, deformable sides, side ledges, side clips, clip bosses, center clips, side arms, and a combination thereof, nor discloses those of the present invention, as claimed in claim 6. The legs 124/126/158/160 of Hawthorne cited by the Examiner are legs of the shipping tray sections, not attachment means for an auxiliary heat spreader. Withdrawal of the rejection is therefore respectfully requested on this ground as well because of *W.L. Gore & Assocs. v. Garlock, Inc.* and the other cases cited therewith, *supra*.

Regarding claim 7, the Applicants also respectfully traverse the rejection since the Applicants' claimed combination includes the limitation not disclosed in Hawthorne of:

"form an integral auxiliary heat spreader"

The Examiner states in the Office Action:

"...form an integral auxiliary heat spreader located on top of the panel (see figures 4, 9, 10)." [deletions for clarity]

However, there is no auxiliary structure in figure 4 of Hawthorne, and the structures in figures 9-10 of Hawthorne are shipping trays, not auxiliary heat spreaders. Withdrawal of the rejection is therefore respectfully requested on this ground as well because of *W.L. Gore & Assocs. v. Garlock, Inc.* and the other cases cited therewith, *supra*.

Serial No.: 10/721,916
Group Art Unit: 2813

Regarding claim 8, the Applicants also respectfully traverse the rejection since the Applicants' claimed combination includes the limitation not disclosed in Hawthorne of:

"forming the unitary metallic plate in substantially a single metal forming process into a cross-sectional profile that is substantially constant in at least one horizontal direction."

The Examiner states in the Office Action:

"...forming the unitary metallic plate in substantially a single metal forming process into a cross-sectional profile that is substantially constant in at least one horizontal direction (see figures 4, 9-10)." [deletions for clarity]

However, Hawthorne makes no reference to forming a cross-sectional profile that is substantially constant in at least one horizontal direction, nor discloses forming the constant profile of the present invention as claimed in claim 8. Withdrawal of the rejection is therefore respectfully requested on this ground as well because of *W.L. Gore & Assocs. v. Garlock, Inc.* and the other cases cited therewith, *supra*.

Regarding independent claim 9, these same issues have been discussed in detail above with respect to the rejection of claim 1, and those arguments are equally applicable to the rejection of claim 9, showing that Hawthorne does not disclose forming a cross-sectional profile that is substantially constant in at least one horizontal direction, as claimed, *inter alia*, in claim 9.

It is therefore respectfully submitted that independent claim 9, and claim 10 depending therefrom, are not anticipated by Hawthorne under 35 USC §102(b). Withdrawal of the rejection of claims 9 and 10 is therefore respectfully requested because of *W.L. Gore & Assocs. v. Garlock, Inc.* and the other cases cited therewith, *supra*.

Additionally, regarding claim 10, the same issues specifically related thereto have been discussed in detail above with respect to the rejections of claims 5 and 6, and those arguments are equally applicable to the rejection of claim 10. Withdrawal of the rejection of claim 10 is therefore respectfully requested because of *W.L. Gore & Assocs. v. Garlock, Inc.* and the other cases cited therewith, *supra*.

Serial No.: 10/721,916
Group Art Unit: 2813


Concerning new claims 21-30, these are similarly respectively patentably distinguished as claims 1-10, to which they generally correspond. No new matter has been added.

Conclusion

In view of the above, it is submitted that the claims are in condition for allowance and reconsideration of the rejections is respectfully requested. Withdrawal of the Restriction Requirement and allowance of claims 1-10 and 21-30 at an early date is solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including any extension of time fees, to Deposit Account No. 50-0374 and please credit any excess fees to such deposit account.

Respectfully submitted,



Mikio Ishimaru
Registration No. 27,449

The Law Offices of Mikio Ishimaru
1110 Sunnyvale-Saratoga Rd., Suite A1
Sunnyvale, CA 94087
Telephone: (408) 738-0592
Fax: (408) 738-0881
Date: December 13, 2005